

Work Order ID 137761

Wednesday, October 07, 2015 12:45:16 PM

137761

Page 1

Qty 1 D2521 to ship Nov 25

Item ID: D2521

Revision ID:

Item Name: Individual Bearpaw

Start Date: 10/07/15 Start Qty: 5.00

Required Date: 10/07/15 Req'd Qty: 5.00

Reference:

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Customer:

Approvals:

Process Plan: MLJ

Date: OCT 09 2015

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2521	Rev J

120 0.00

120

Waterjet

FLOW CNC Waterjet

FLOW WATER JET

Memo

Cut Blank as per D2521 blank file

0.04

(7) 15/11/12

130

130

HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1-Inspect material for defects or damage prior to machining
2-Machine as per Folio and Dwg D2521 Identify as D2521
3-Deburr

0.00

0.07

1 15/11/12

140

140

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

1 15/11/12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

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Page 2

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 10/07/15 **Start Qty:** 5.00 ***5***

Cust Item ID:

Required Date: 10/07/15 **Req'd Qty:** 5:00 ***5***

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop ***NR2***

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

**Insp.
Stamp**

0.00

150

0.00

QC

Memo

Quality Control

Identify as per dwg & Stock Location:

0.00

160

0.00

Packaging

Memo

Packaging

QC21- Final Inspection - Work Order Release

0.00

170

0.01

QC

Memo

Quality Control

MLS 15-11-25

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY							
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Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Picklist Print

Wednesday, October 07, 2015 12:45:15 PM

Page 1

Work Order ID: 137761

137761

Parent Item: D2521

D2521

Parent Item Name: Individual Bearpaw

Start Date: 10/07/15

Required Date: 10/07/15

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP Rev:A 08-10-01 New Manufacturing Method JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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MUHMWB10

Purchased

No

sf

484.0000

36.84211

MUHMWB10

02/15/11/12

UHMW 1" Black - 48"x120" Tivar Mfg.#52480104

Location

Loc Qty

Loc Code

MAT

84

m132063

84

MAT018

400

m133248

400

39

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
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								Lead hand / Supervisor Approval Verification	
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Root Cause				FAULT CATEGORY					
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
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Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
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Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

DART AEROSPACE LTD		Work Order: 137761
Description: Bearpaw		Part Number: D2521
Inspection Dwg: D2521	Rev: J	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension			Actual Dimension	Accept	Reject	Method of Inspection	Comments
Dim	Min	Max					
A	0.260	0.266	0.260	✓		MIP-04	vern
B	0.90	0.96	0.930	✓			
C	0.27	0.330	0.330	✓			
D	0.470	0.530	0.500	✓			
E	21.740	21.760	21.750	✓		MIP-07	Tape
F	0.72	0.780	0.750	✓		MIP-04	vern
G	0.35	0.410	0.372	✓			
H	11.490	11.570	11.500	✓		CNC-02	vern
I	3.41	3.47	3.424	✓		MIP-04	vern
J	11.790	11.810	11.795	✓		CNC-02	vern
K	9.47	9.53	9.507	✓			
L	7.190	7.210	7.196	✓			
M	6.910	6.970	6.940	✓			
N	44.47	44.530	44.500	✓		MIP-07	vern Tape
O	6.590	6.650	6.630	✓		CNC-02	vern
P	0.940	0.980	0.940	✓		MIP-04	vern
Q	18.97	19.03	19.000	✓		Tape MIP-07	Tape
R	0.350	0.410	0.375	✓		MIP-04	vern
S	0.740	0.780	0.765	✓			
T	0.240	0.280	0.260	✓			
U	0.370	0.410	0.390	✓			
V	0.740	0.780	0.760	✓			
W	0.740	0.780	0.765	✓			

Measured by: <i>[Signature]</i>	Audited by: <i>[Signature]</i> DAS	Prototype Approval:	N/A
Date: 15/11/25	Date: 15/11/25 08 9-89	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue P/O D205-564-011 & D430-688-011	KJ/RF	
B	05.06.15	Dimensions and tolerances changed	KJ/RF	
C	06.08.31	Dimensions updated per D2521 Rev. J	KJ/JLM <i>[Signature]</i>	<i>[Signature]</i>



DESIGN #	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CP	APPROVED #	DRAWING NO. D2521	REV. J
DATE 06.07.28	TITLE 205 BEARPAW		SHEET 1 OF 3
		SCALE NTS	
A	95.11.28	NEW ISSUE	
B	96.01.11	SHOW BENDING MOVE HOLES	
C	96.01.29	ADJUST HOLE LOCATION FOR TOOLING	
D	96.05.14	ADJUSTED BEAR PAW THICKNESS	
E	96.12.18	43.500 WAS 46.750	
F	97.05.07	ADDED REAR POCKET, MOVED HOLES	
G	98.08.06	ADD C'BORE AND CHAMFER EDGES	
H	03.01.30	CHANGE GEOMETRY FOR RUN-ON LDG.	
I	05.05.20	REMOVE BEND; CHANGE TOLERANCES	
J	06.07.28	CHANGE FOR FLOAT SKIDTUBE	

15-10-09
NO. 137761 M25
WORK ORDER
WITHOUT NOTICE
SUBJECT TO AMENDMENT
UNCONTROLLED COPY
ENGINEERING
RETURN TO
SHIP COPY

RELEASED

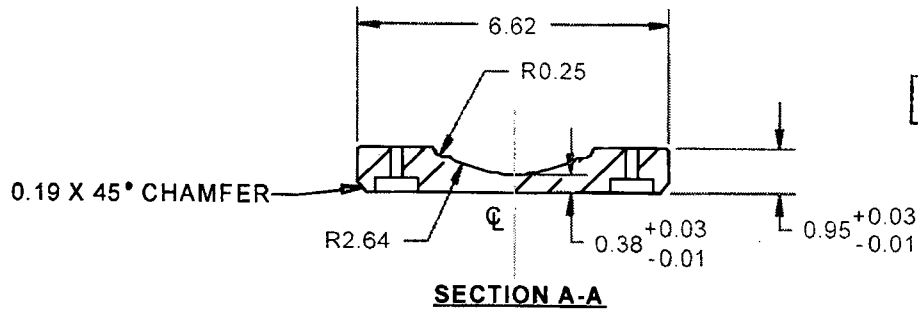
06.08.23 #

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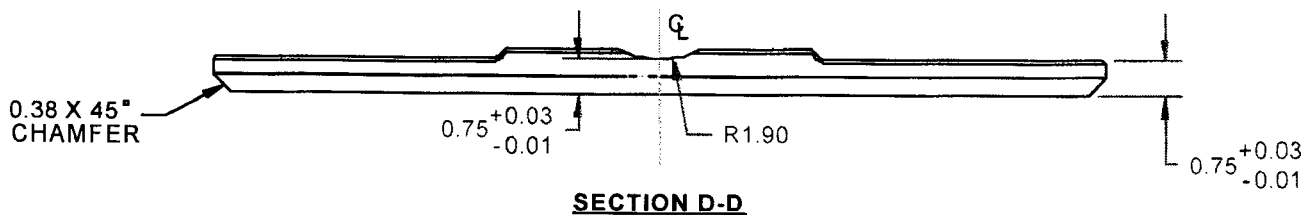
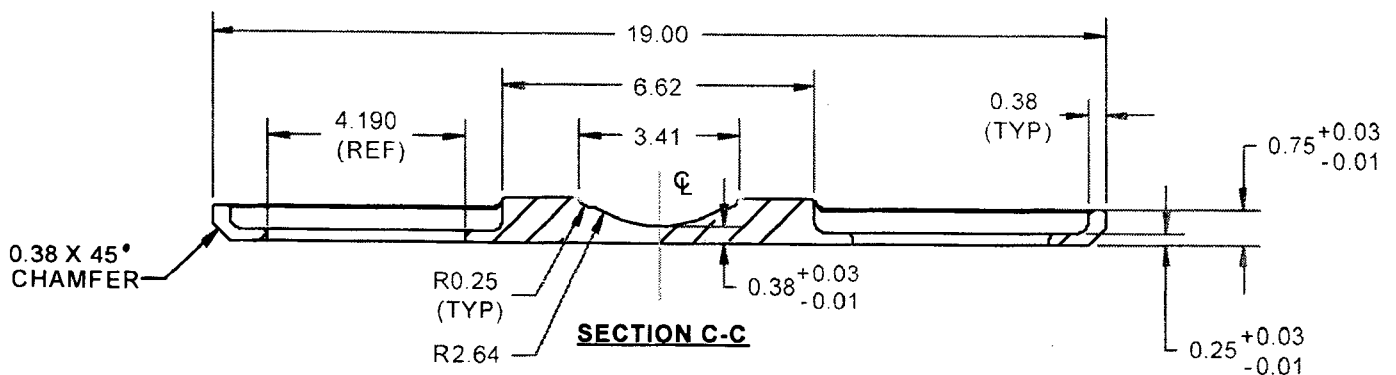
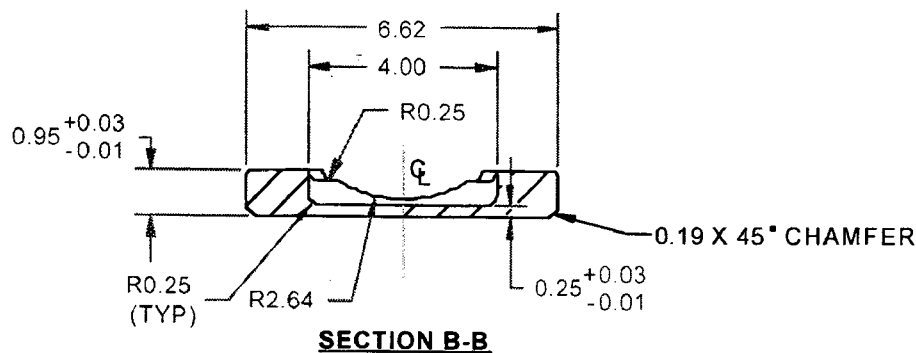


DESIGN #	DRAWN BY C.B.	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CP	APPROVED #	DRAWING NO. D2521	REV. J
DATE 06.07.28	TITLE 205 BEARPAW	SHEET 3 OF 3	
		SCALE 1:4	



RELEASED

06.08.23



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